AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior listings and versions of claims in the application.

1-31. (cancelled)

32. (currently amended) A method for analyzing microRNA, comprising:

a) contacting microRNA comprising a 3' portion comprising a 3' terminal end and a 5' portion comprising a 5' terminal end with a first hairpin probe and a second hairpin probe to form an RNA detection structure, wherein

i) said first hairpin probe comprises a 3' region that is complementary said 3' portion of said microRNA, and a 5' region that is not complementary to said microRNA, wherein a first portion of said 5' region is complementary to a second portion of said 5' region, wherein said first portion and said second portion of said 5' region hybridize to each other to form a first duplex when said hairpin probe is hybridized to said microRNA, and wherein said first duplex and said 3' region of said probe are within one nucleotide of each other; and

ii) said second hairpin probe comprises a 5' region that is complementary to said 5' portion of said microRNA and a 3' region that is not complementary to said microRNA, wherein a first portion of said 3' region is complementary to a second portion of said 3' region, wherein said first portion and said second portion of said 3' region hybridize to each other to form a second duplex when said hairpin probe is hybridized to said microRNA, and wherein said second duplex and said 5' region of said probe are within one nucleotide of each other;

wherein, in said RNA detection structure, said microRNA and said first and second hairpin probes form a dumbbell structure,

b) detecting formation of said RNA detection structure, wherein formation of said RNA detection structure is indicative of the presence of said microRNA.

33. (previously presented) The method of claim 32, wherein said detecting comprises quantitating said microRNA.

34. (previously presented) The method of claim 32, wherein said detecting comprises forming an invasive cleavage structure, cleaving said invasive cleavage structure, and detecting the cleavage of said invasive cleavage structure.

35. (withdrawn) The method of claim 32, wherein said detecting comprises use of a detection assay that employs sequence analysis.

36. (previously presented) The method of claim 32, wherein said detecting comprises use of a detection assay that employs polymerase chain reaction.

37. (withdrawn) The method of claim 32, wherein said detecting comprises use of a detection assay that employs microarray hybridization .

38. (withdrawn) The method of claim 32, wherein said detecting comprises use of a detection assay that employs ligation.

39. (previously presented) The method of claim 32, wherein said detecting comprises use of a labeled probe.

40. (previously presented) The method of claim 39, wherein said labeled probe is fluorescently labeled.

41. (previously presented) The method of claim 39, wherein said labeled probe is configured for FRET detection.

42. (previously presented) The method of claim 41, wherein said labeled probe has a first conformation when not hybridized in a duplex and a second conformation when hybridized in a duplex.

43. (previously presented) The method of claim 41, wherein said labeled probe exhibits increased fluorescence when hybridized in a duplex.

44. (previously presented) The method of claim 32, wherein said detecting comprises use of a detection assay that employs polymerase chain reaction coupled with 5' nuclease cleavage of a labeled probe.

45. (previously presented) The method of claim 44, wherein said labeled probe is fluorescently labeled.

46. (previously presented) The method of claim 44, wherein said labeled probe is configured for FRET detection upon cleavage.

47. (previously presented) The method of claim 32, wherein said detecting comprises exposing said RNA detection structure to a polymerase under conditions that permit primer extension.

48. (previously presented) The method of claim 32, wherein said detecting comprises determining the presence of said microRNA in a sample.

49. (previously presented) The method of claim 48, wherein said detecting comprises distinguishing said microRNA from another nucleic acid in said sample.

50. (previously presented) The method of claim 49, wherein said sample comprises a cell lysate.

51. (previously presented) The method of claim 32, wherein said microRNA is approximately 21-22 nucleotides in length.

52. (previously presented) The method of claim 32, wherein a plurality of different microRNAs are detected.

53. (previously presented) The method of claim 52, wherein said plurality of microRNAs comprise a first microRNA and a second microRNA that is said first microRNA having a polymorphism.

54. (previously presented) The method of claim 32, wherein said microRNA is selected from the group consisting of Let-7, miR-1, miR-135, miR-15, miR-16, miR125b, miR-1d, and miR124a.

55. (previously presented) The method of claim 32, wherein at least a portion of said RNA detection structure comprises a nucleotide analog.

56. (previously presented) The method of claim 32, wherein at least a portion of said RNA detection structure comprises a peptide nucleic acid.

57. (currently amended) A method for analyzing microRNA, comprising:

a) contacting microRNA comprising a 3' portion comprising a 3' terminal end and a 5' portion comprising a 5' terminal end with a first

hairpin probe and a second hairpin probe to form an RNA detection structure wherein

~~a~~i) said first hairpin probe comprises a 3' region that is complementary said 3' portion of said microRNA, and a 5' region that is not complementary to said microRNA, wherein a first portion of said 5' region is complementary to a second portion of said 5' region, wherein said first portion and said second portion of said 5' region hybridize to each other to form a first duplex when said hairpin probe is hybridized to said microRNA, and wherein said first duplex and said 3' region of said probe are within one nucleotide of each other; and

~~b~~ii) said second hairpin probe comprises a 5' region that is complementary to said 5' portion of said microRNA and a 3' region that is not complementary to said microRNA, wherein a first portion of said 3' region is complementary to a second portion of said 3' region, wherein said first portion and said second portion of said 3' region hybridize to each other to form a second duplex when said hairpin probe is hybridized to said microRNA, and wherein said second duplex and said 5' region of said probe are within one nucleotide of each other;

wherein, in said RNA detection structure, said microRNA and said first and second hairpin probes form a dumbbell structure,

b) reacting said RNA detection structure with a nucleic acid modifying enzyme to form an modified RNA detection structure;

c) detecting formation of said modified RNA detection structure, wherein formation of said modified RNA detection structure is indicative of the presence of said microRNA, and wherein said detecting formation

of said modified RNA detection structure comprises use of an amplification reaction.

58. (previously presented) The method of Claim 57, wherein said amplification reaction comprises a target amplification reaction.

59. (previously presented) The method of claim 58, wherein said target amplification reaction comprises a polymerase chain reaction.

60. (previously presented) The method of Claim 57, wherein said amplification reaction comprises a signal amplification reaction.

61. (previously presented) The method of Claim 60, wherein said signal amplification reaction comprises forming an invasive cleavage structure, cleaving said invasive cleavage structure, and detecting the cleavage of said invasive cleavage structure.

62. (previously presented) The method of claim 57, wherein said detecting comprises quantitating said microRNA.

63. (previously presented) The method of claim 57, wherein said detecting comprises use of a labeled probe.

64. (previously presented) The method of claim 63, wherein said labeled probe is fluorescently labeled.

65. (previously presented) The method of claim 64, wherein said labeled probe is configured for FRET detection.

66. (previously presented) The method of claim 63, wherein said labeled probe has a first conformation when not hybridized in a duplex and a second conformation when hybridized in a duplex.

67. (previously presented) The method of claim 63, wherein said labeled probe exhibits increased fluorescence when hybridized in a duplex.

68. (previously presented) The method of claim 59, wherein said polymerase chain reaction is coupled with 5' nuclease cleavage of a labeled probe.

69. (previously presented) The method of claim 68, wherein said labeled probe is fluorescently labeled.

70. (previously presented) The method of claim 68, wherein said labeled probe is configured for FRET detection upon cleavage.

71. (previously presented) The method of claim 57, wherein said detecting comprises exposing said RNA detection structure to a polymerase under conditions that permit primer extension.

72. (cancelled)

73. (previously presented) The method of claim 57, wherein said detecting comprises distinguishing said microRNA from another nucleic acid in said sample.

74. (previously presented) The method of claim 72, wherein said sample comprises a cell lysate.

75. (previously presented) The method of claim 57, wherein said microRNA is approximately 21-22 nucleotides in length.

76. (previously presented) The method of claim 57, wherein a plurality of different microRNAs are detected.

77. (previously presented) The method of claim 74, wherein said plurality of microRNAs comprise a first microRNA and a second microRNA that is said first microRNA having a polymorphism.

78. (previously presented) The method of claim 57, wherein said microRNA is selected from the group consisting of Let-7, miR-1, miR-135, miR-15, miR-16, miR125b, miR-1d, and miR124a.

79. (previously presented) The method of claim 57, wherein at least a portion of said unlabeled RNA detection structure comprises a nucleotide analog.

80. (previously presented) The method of claim 57, wherein at least a portion of said unlabeled RNA detection structure comprises a peptide nucleic acid.

81. (cancelled)

82. (cancelled)